In the Claims:

1-18 (cancelled)

19. (new) 1. A method for the generation and processing of signaling necessary to transmit information through a network, the method comprising the steps of:

Using a bus to transmit data on the network;

having a plurality of devices on the bus;

using a bus arbitration device to control conflict of data transmissions on the bus;

having the data be encapsulated in packets with the packets having the following fields, an address field, a command field and a bi-directional data field; and

having a plurality of the devices with the ability to serve as a master device as well as a slave device;

having a master device sends a data packet through the bus to a slave device, an acknowledge bit is sent to the master device from the slave device for each received byte, and said data packet contains the address of the destination device. ;

having a slave device generate and send an acknowledge to the master device; and

adding a new device on said network by setting the new device as a slave device; and

resetting the new device as a master device if the new device needs to sends data.

20. (new) The method of claim 19 which includes the follow steps on the sending of data on the network:

Setting the device as a master device if it is not already set as a master device;

Checking the bus arbitration for availability of the bus;

Sending the data if the bus is available; and

Waiting a period of time if the bus is not free and repeat the previous two steps until the data is sent.

21. (new) A network comprising:

A bus to transmit data on the network;

A plurality of devices on the bus;

A bus arbitration device to control conflict of data transmissions on the bus;

Data that is encapsulated in packets with the packets having the following fields, an address field, a command field and a bi-directional data field where said packets consists of an address field, a command field, a data field and an error correction field;

A plurality of the devices serving as a master device as well as a slave device;

where a device that switches to a master device; and

having the rest of the plurlarity of devices on the bus set as slave devices.

where said master unit device sends a data packet through the bus to a slave device, an acknowledge bit is sent from the slave device for each received byte, and said data packet contains the address of the destination device.

16. The network of claim 21 in which the slave device generates and sends an acknowledge to the master device.

22. (new) The network of claim 21 which comprises a new device which is set as a slave device and is reset to a master device if the new device needs to sends data.

23. (new) The network of claim 21 which comprises:

a device that is set as a master device to send data if it is not already set as a master device, having the device checks the bus arbitration for availability of the bus, the device sends the data if the bus is available, the device will wait a period a period of time if the bus is not free and repeat the previous two steps until the data is sent.